

Fig. 1A

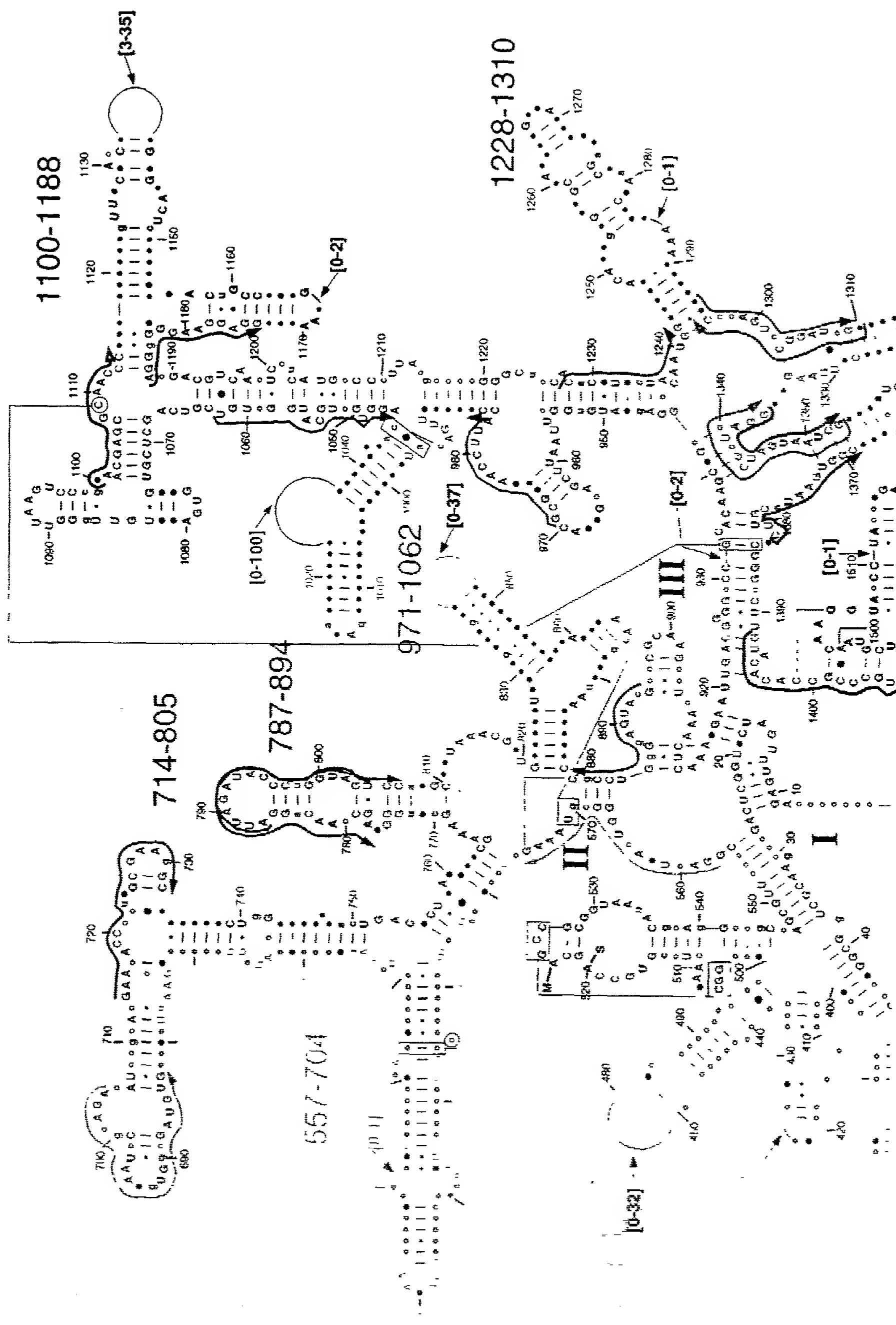


Fig. 1B

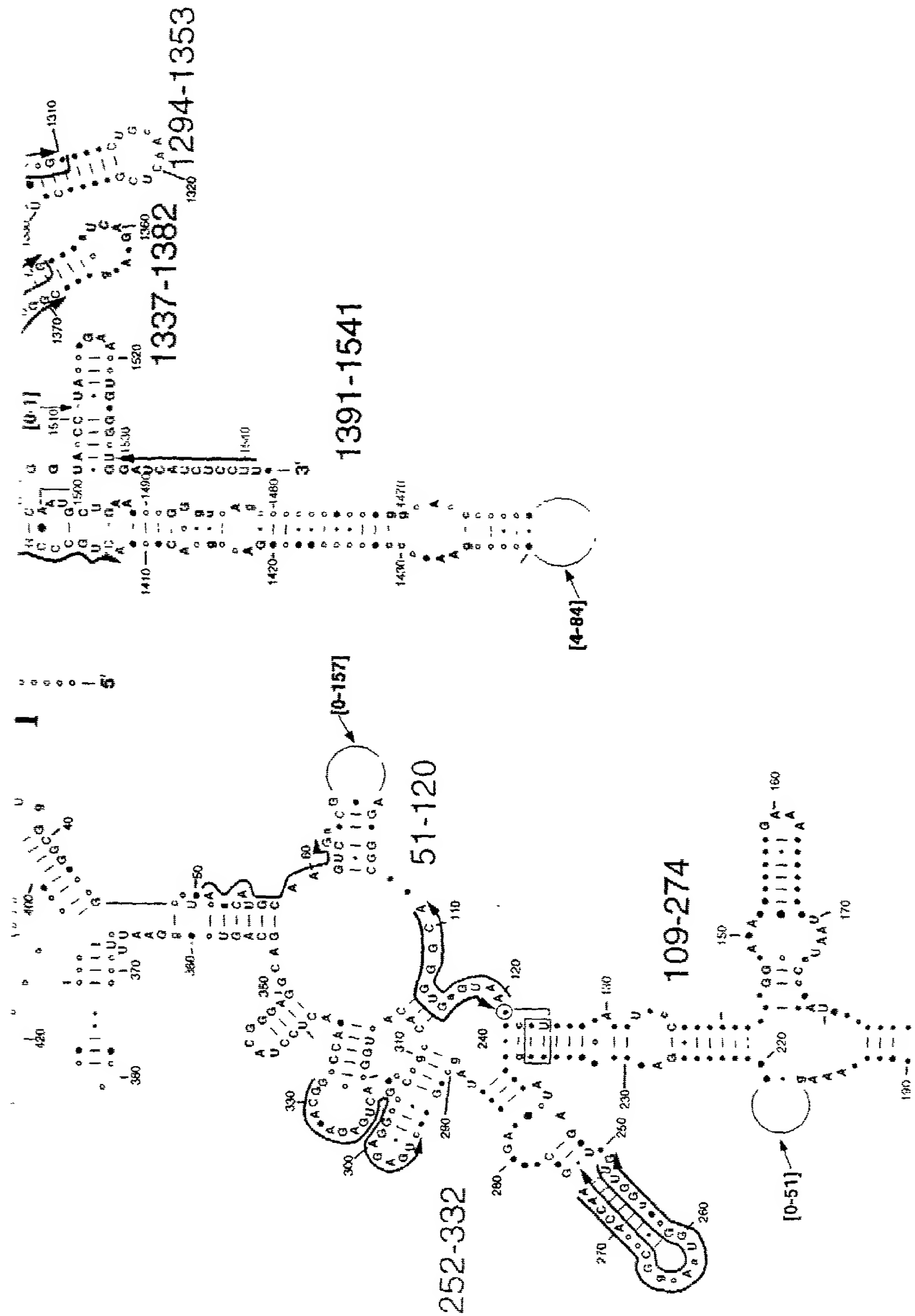
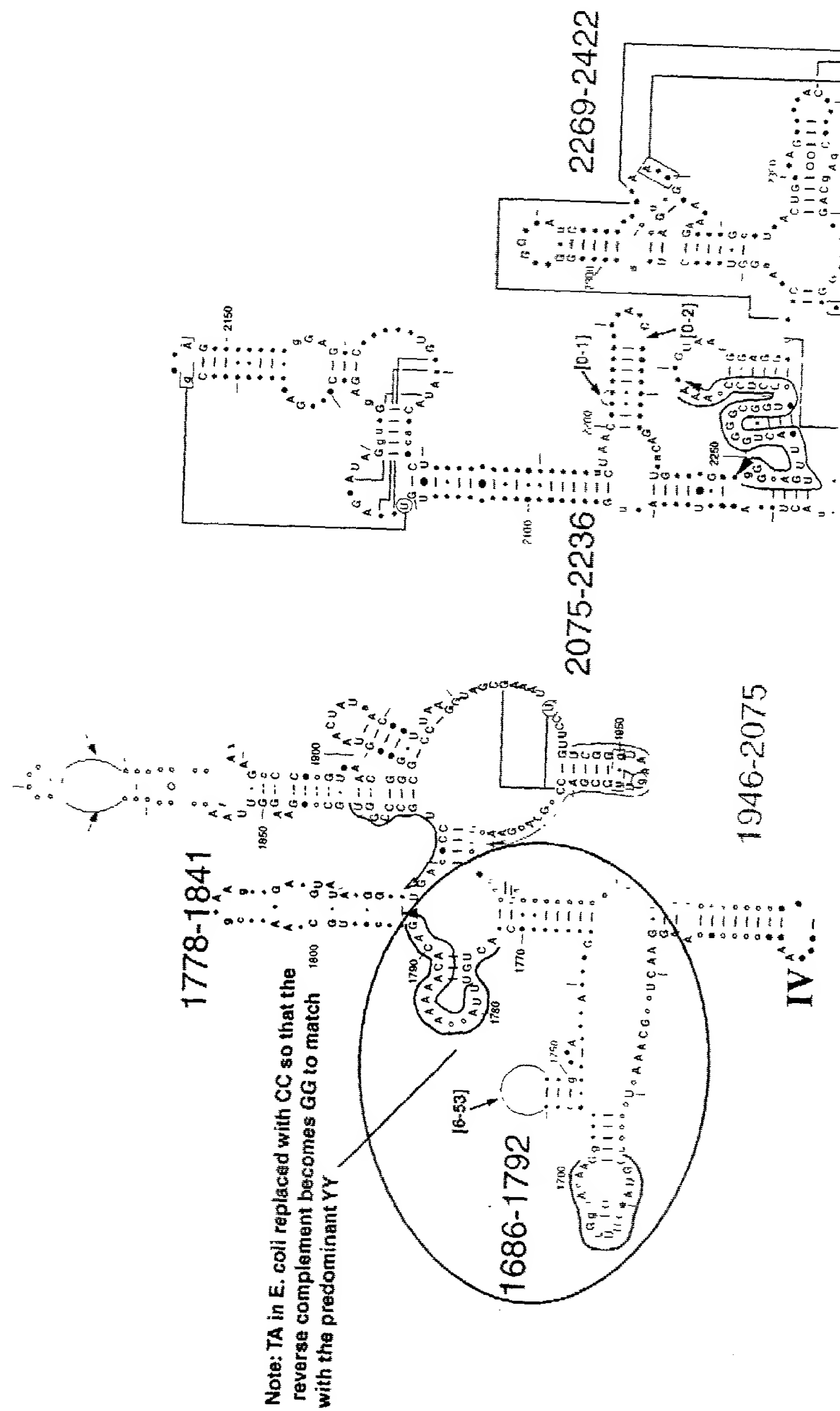


Fig. 1C



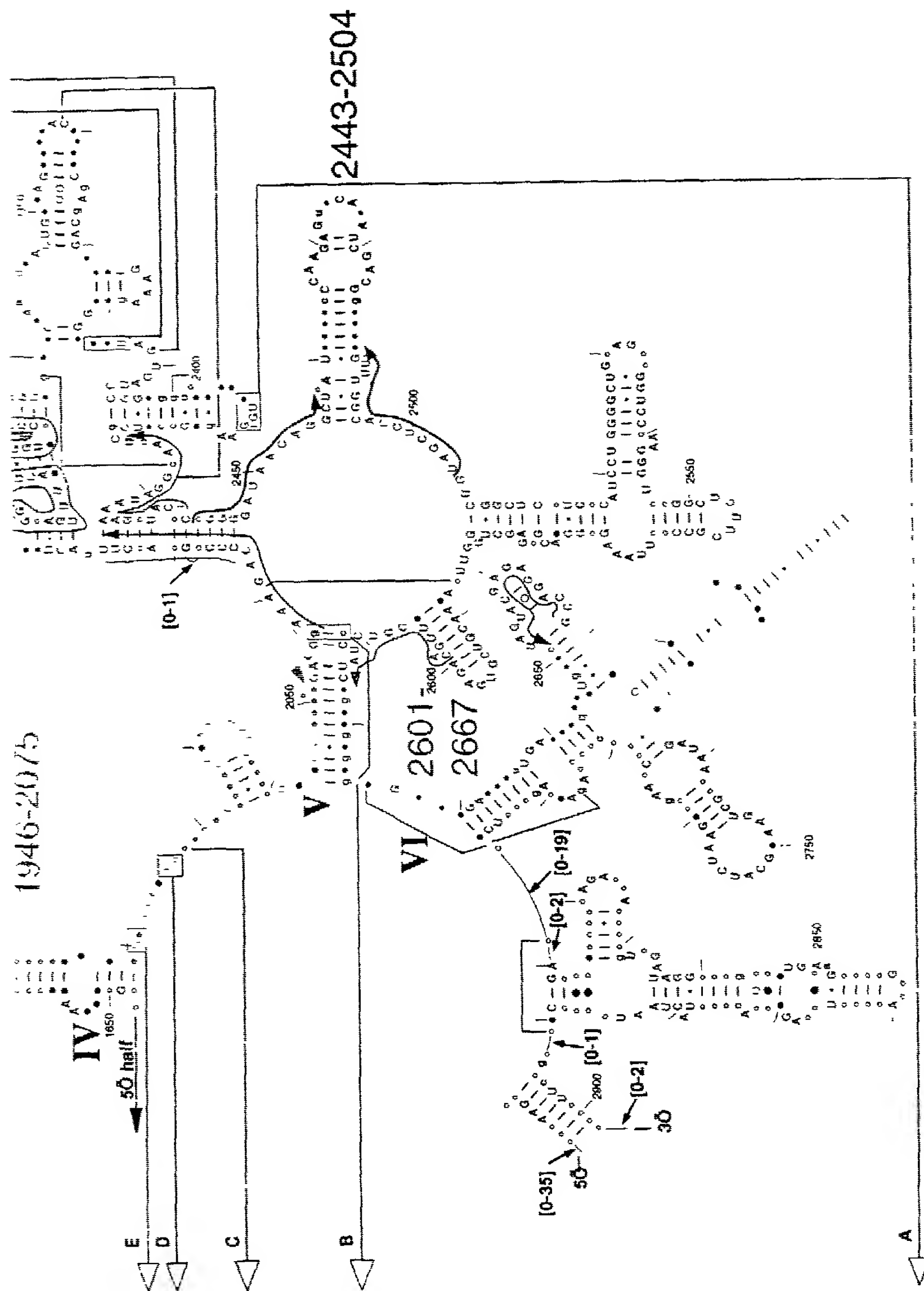
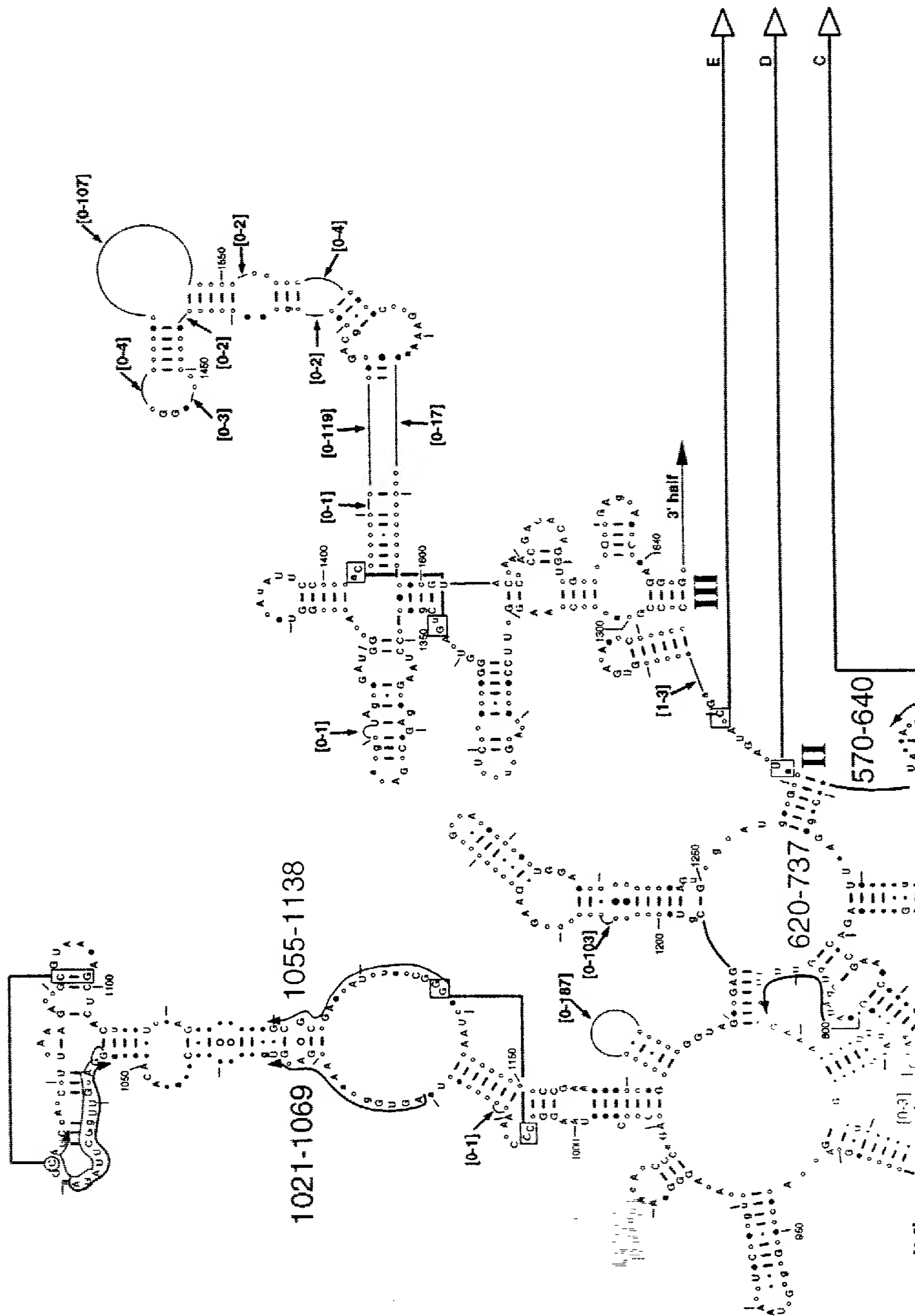


Fig. 1E



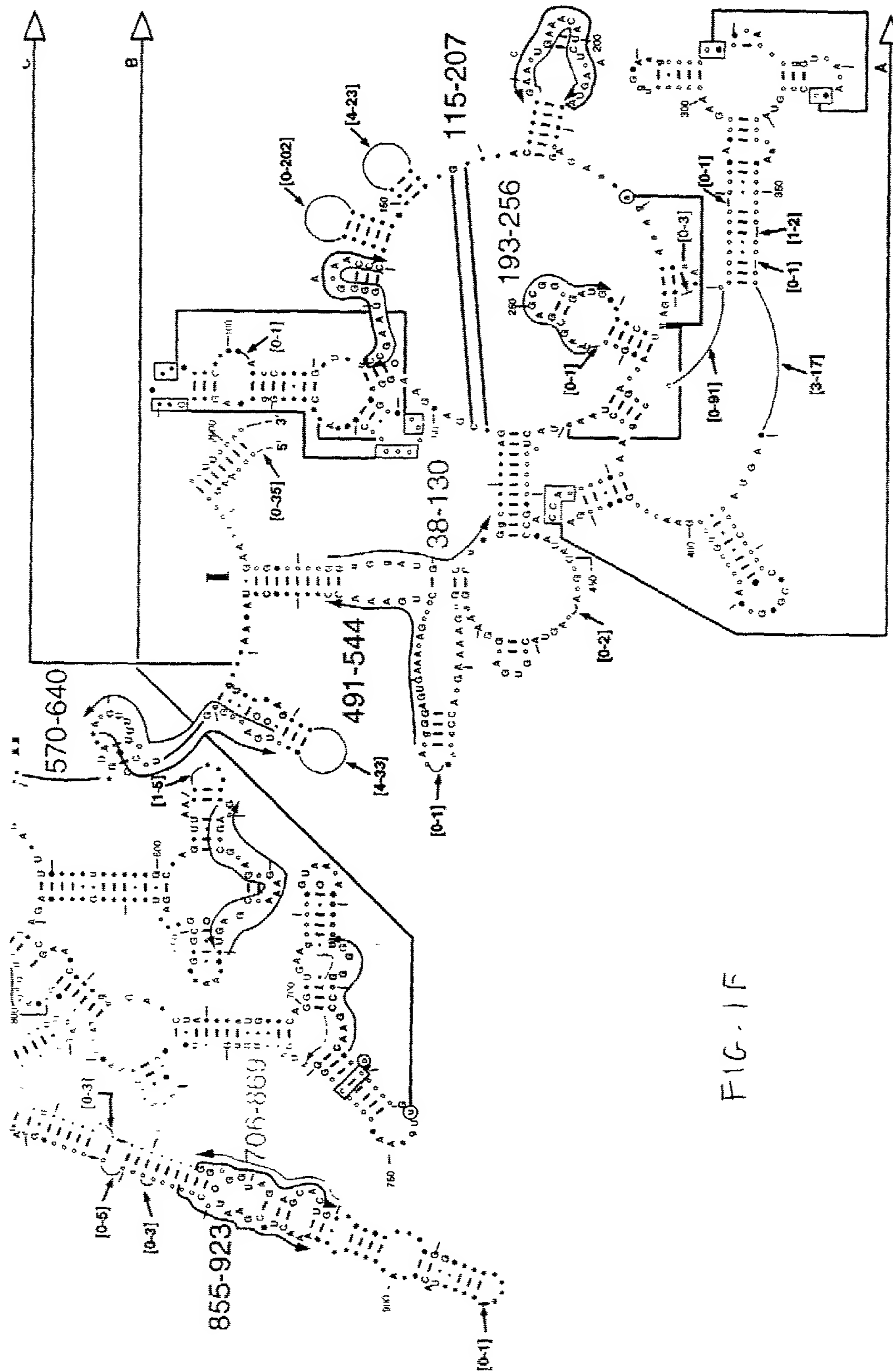


FIG. 1F

FIG. 1G

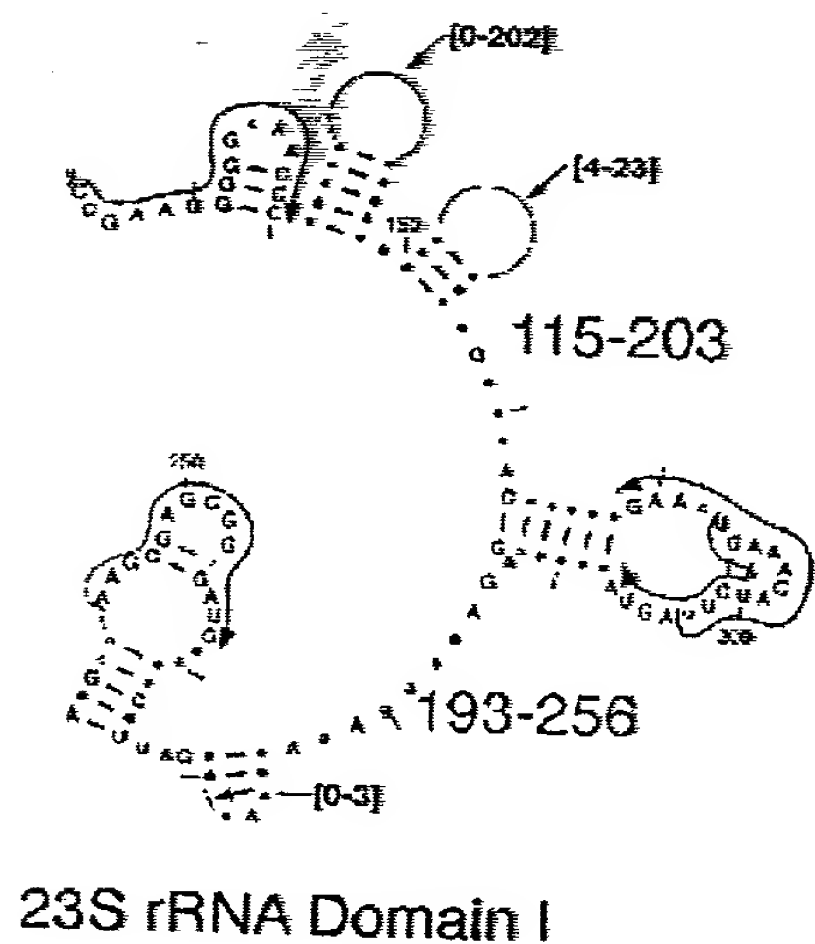


FIG. 1H

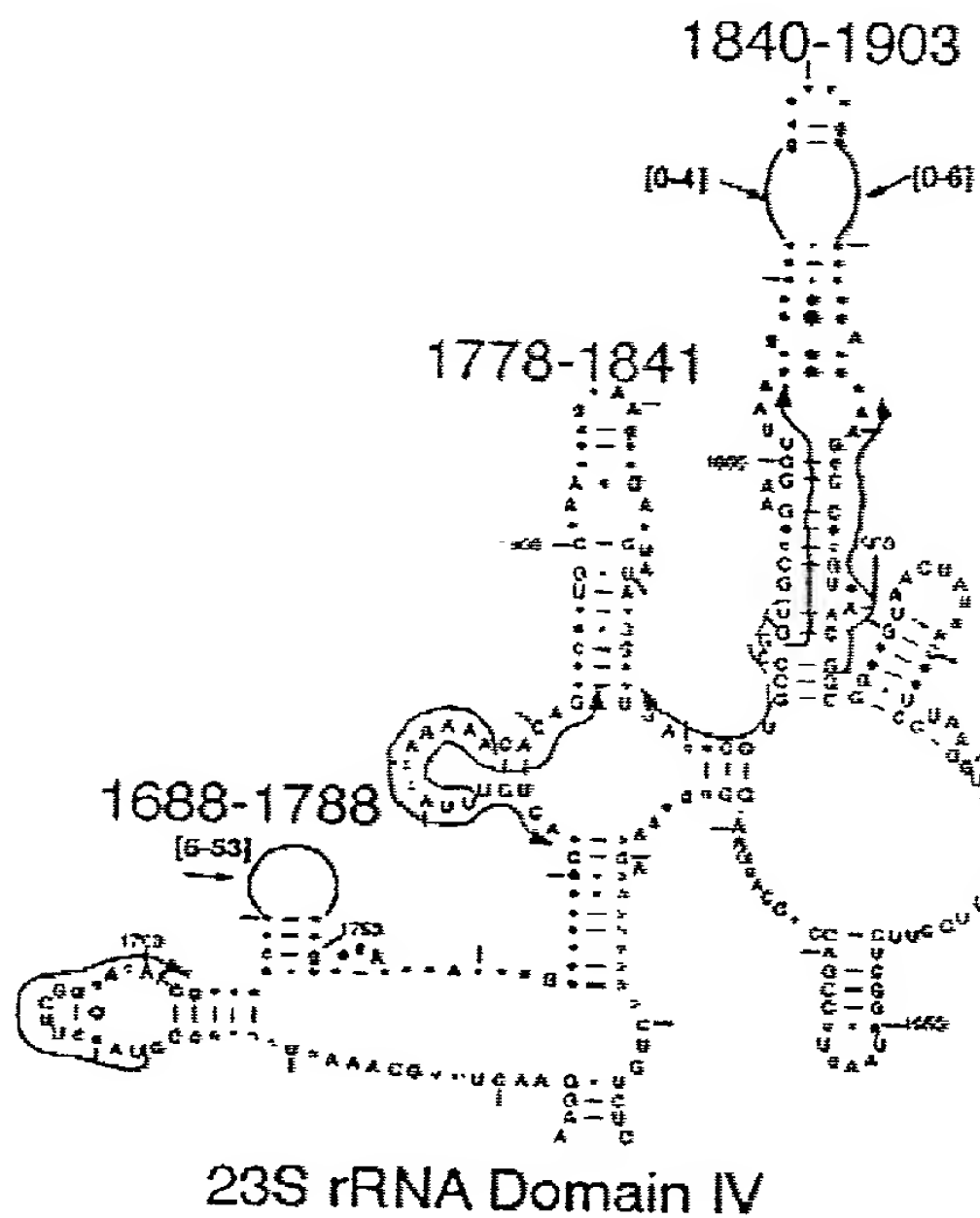


FIG. 1I

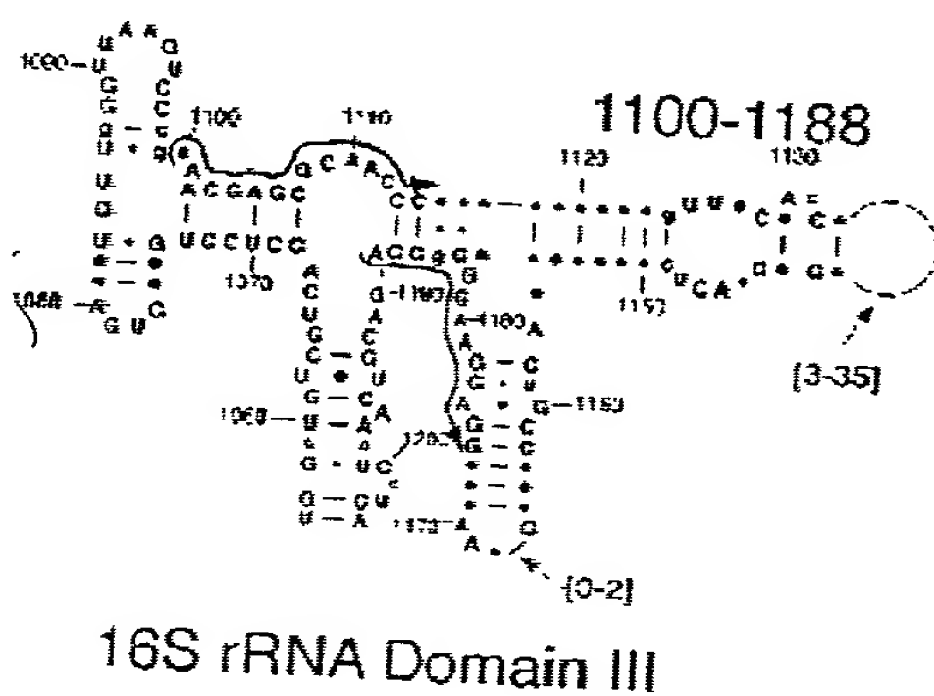
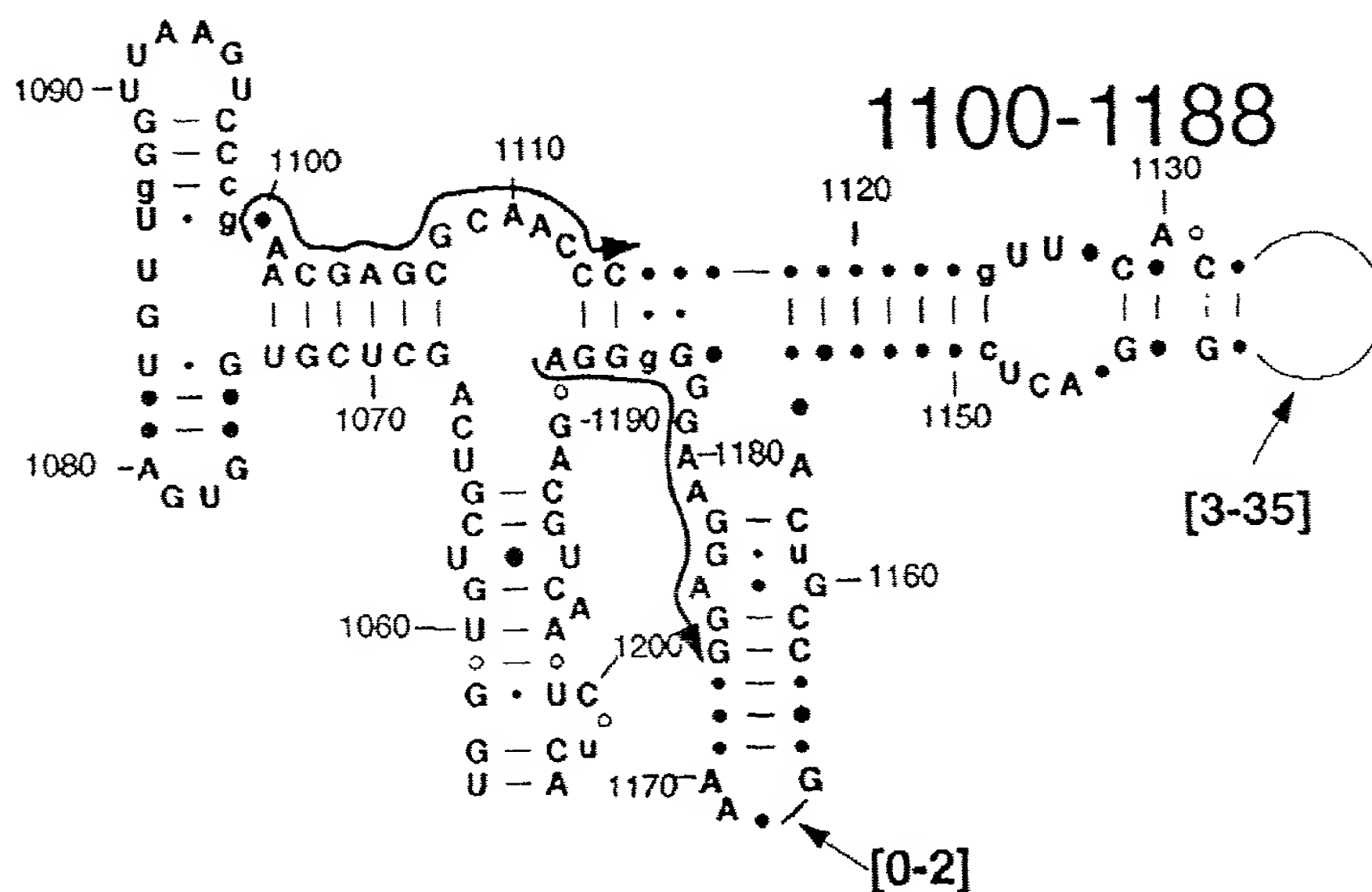


FIG. 2



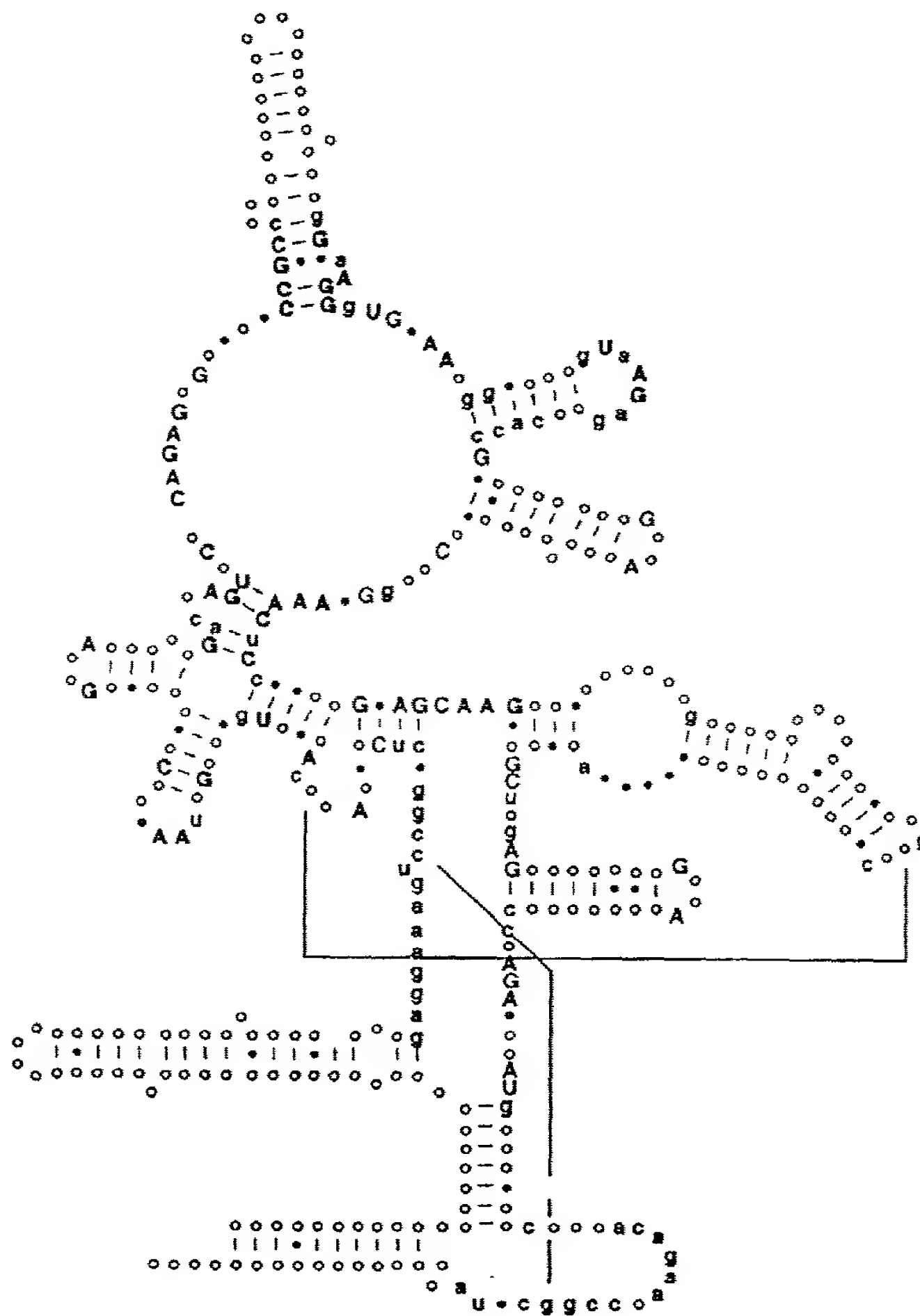
16S rRNA Domain III

109913.036801

Title A SECONDARY STRUCTURE DEFINING DATABASE AND METHODS FOR DETERMINING IDENTITY AND GEOGRAPHIC ORIGIN OF AN UNKNOWN BIOAGENT THEREBY

Inventors: David J. Ecker, Richard Griffey, Rangarajan Sampath, Steven Hofstadler, John McNeil, Stanley T. Crooke

FIG. 3

[illegible]

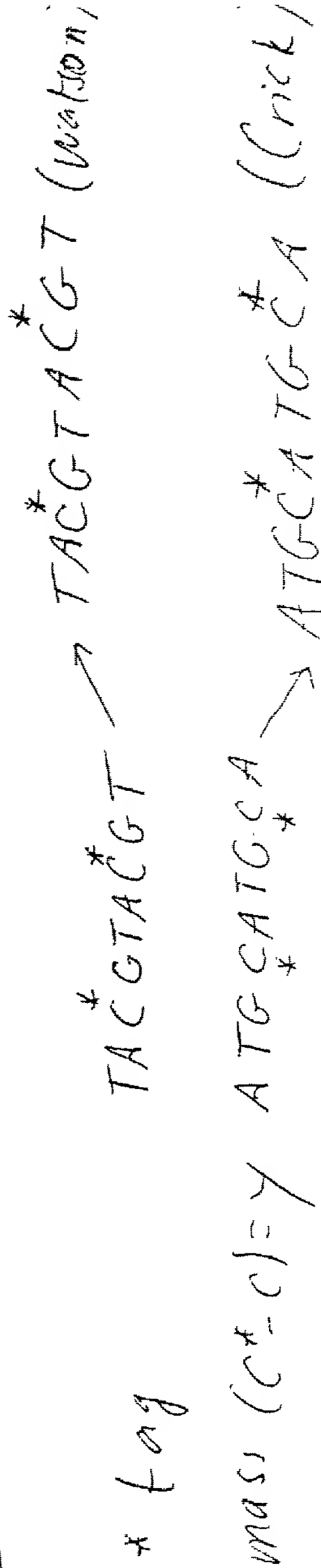
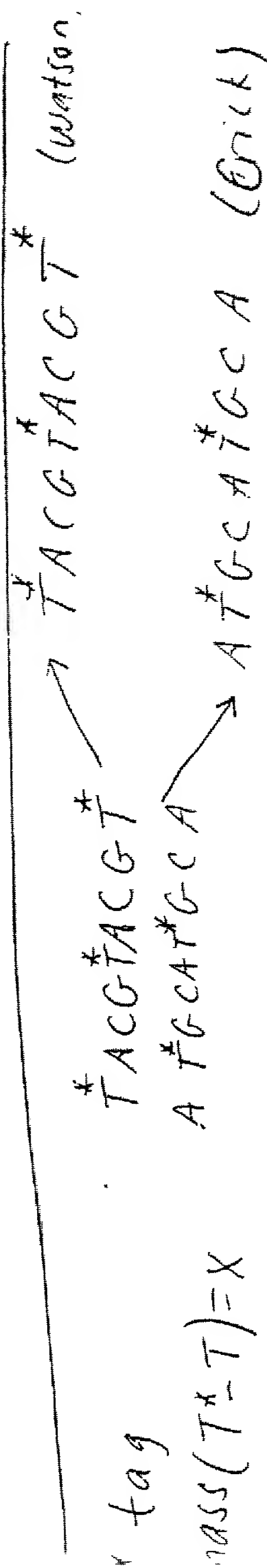
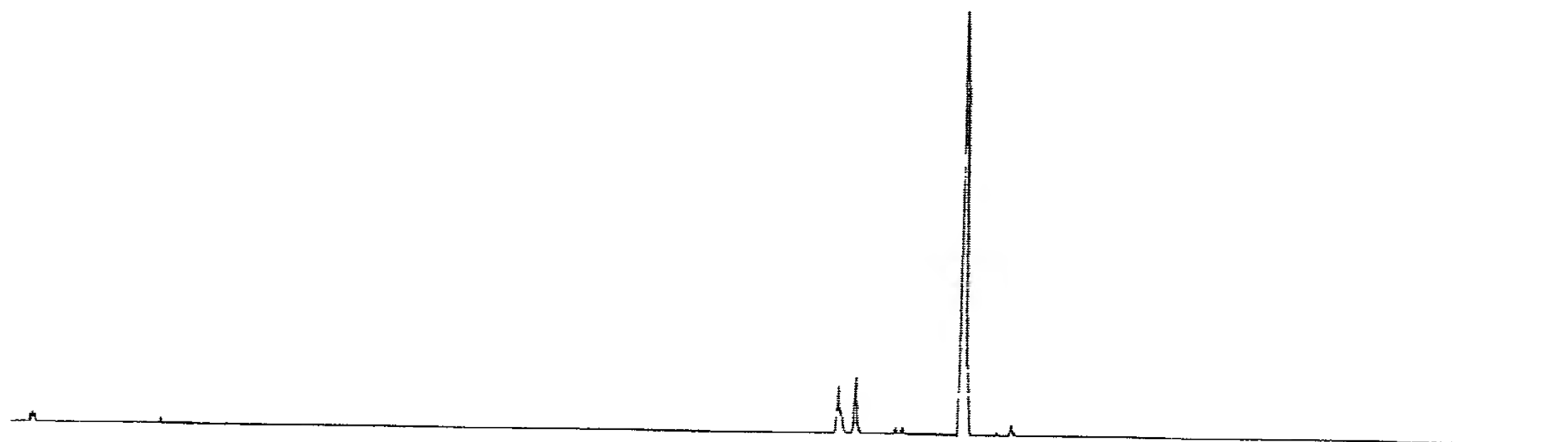


FIG. 4

FIG. 5

B. anthracis ($A_{14}G_9C_{14}T_9$) $MW_{meas} = 14072.2$



*B. anthracis** ($A_1A^*_{13}G_9C_{14}T_9$) $MW_{meas} = 14280.9$

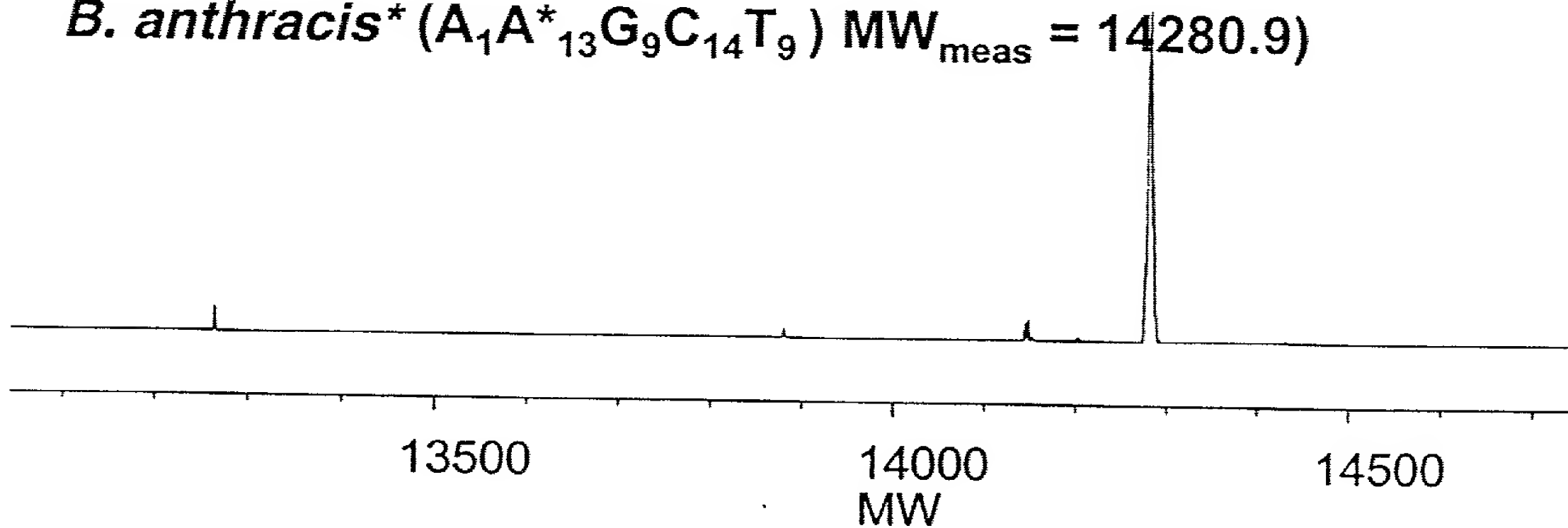
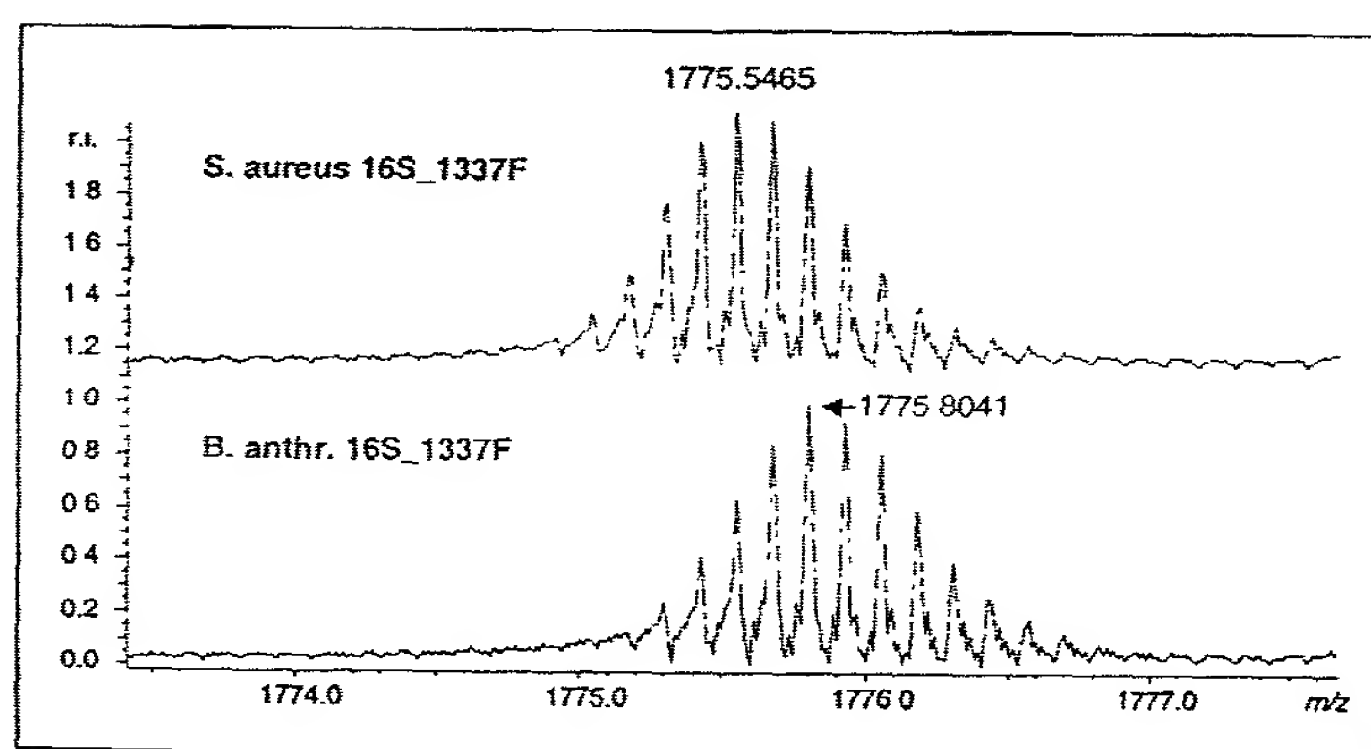


FIG. 6



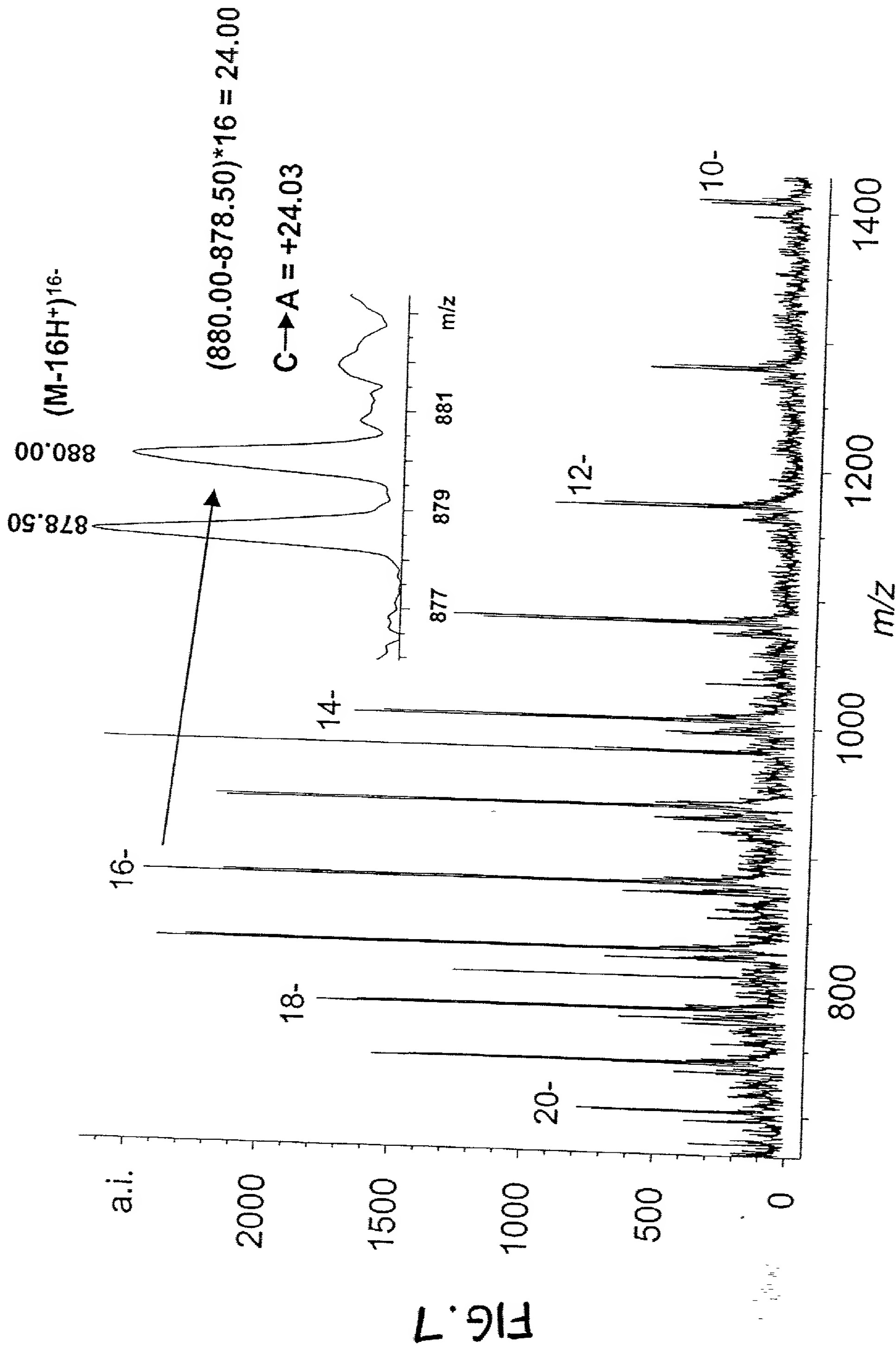


FIG. 7

ESI-TOF MS of sspE 56mer + Calibrant

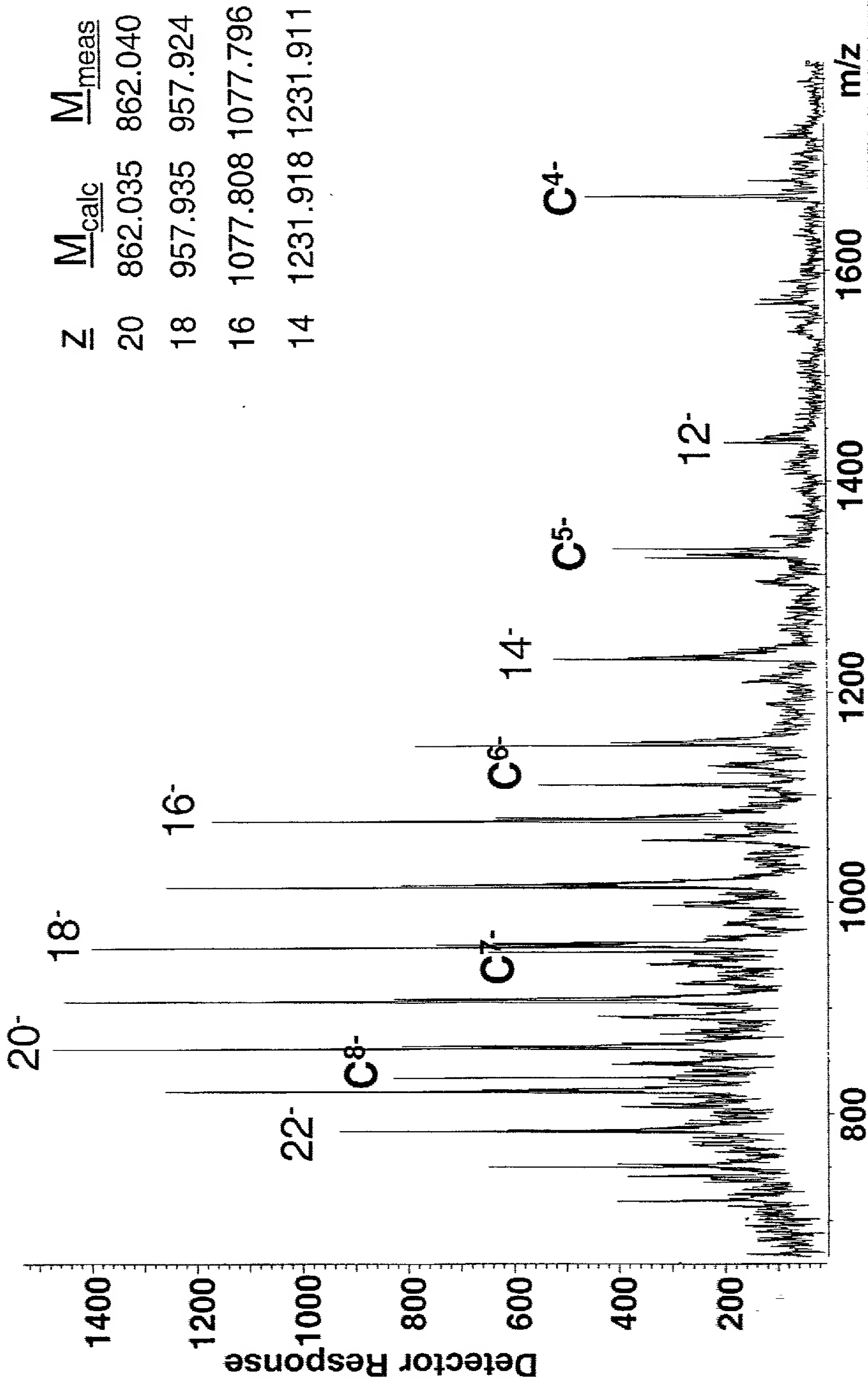


Fig. 8

Bacillus anthracis – ESI-TOF
Synthetic 16S_1228 duplex (Reverse and Forward strands)

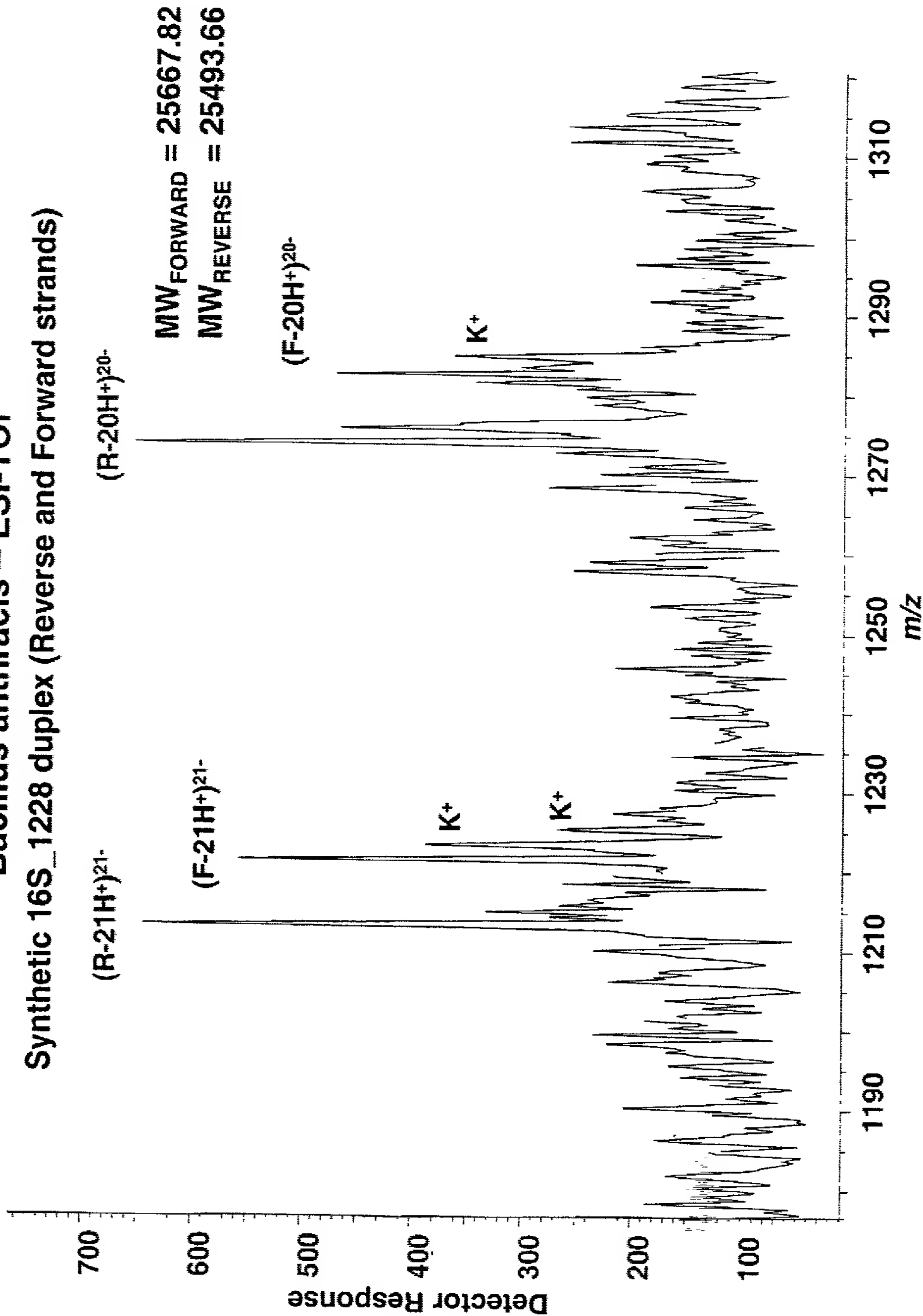
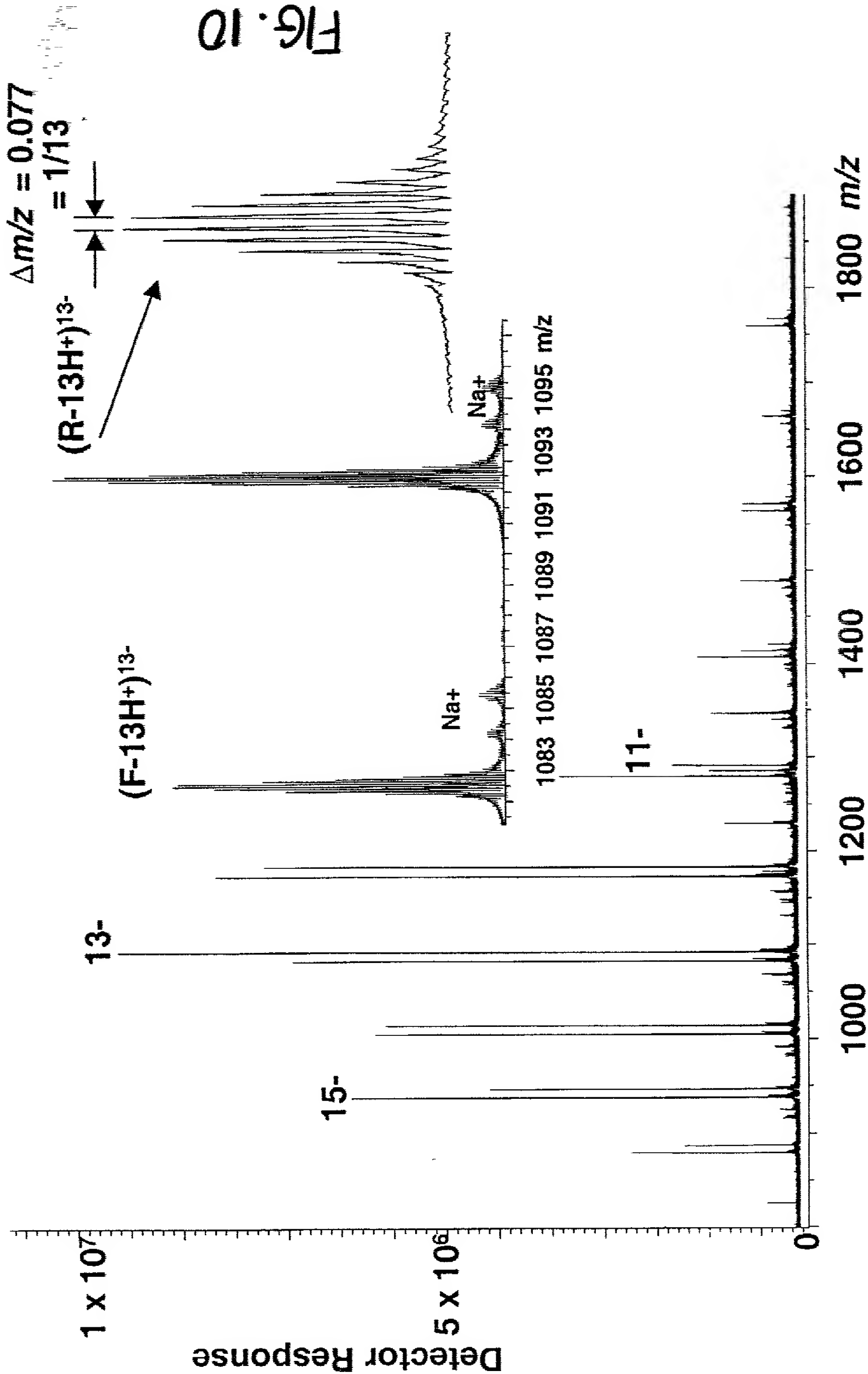
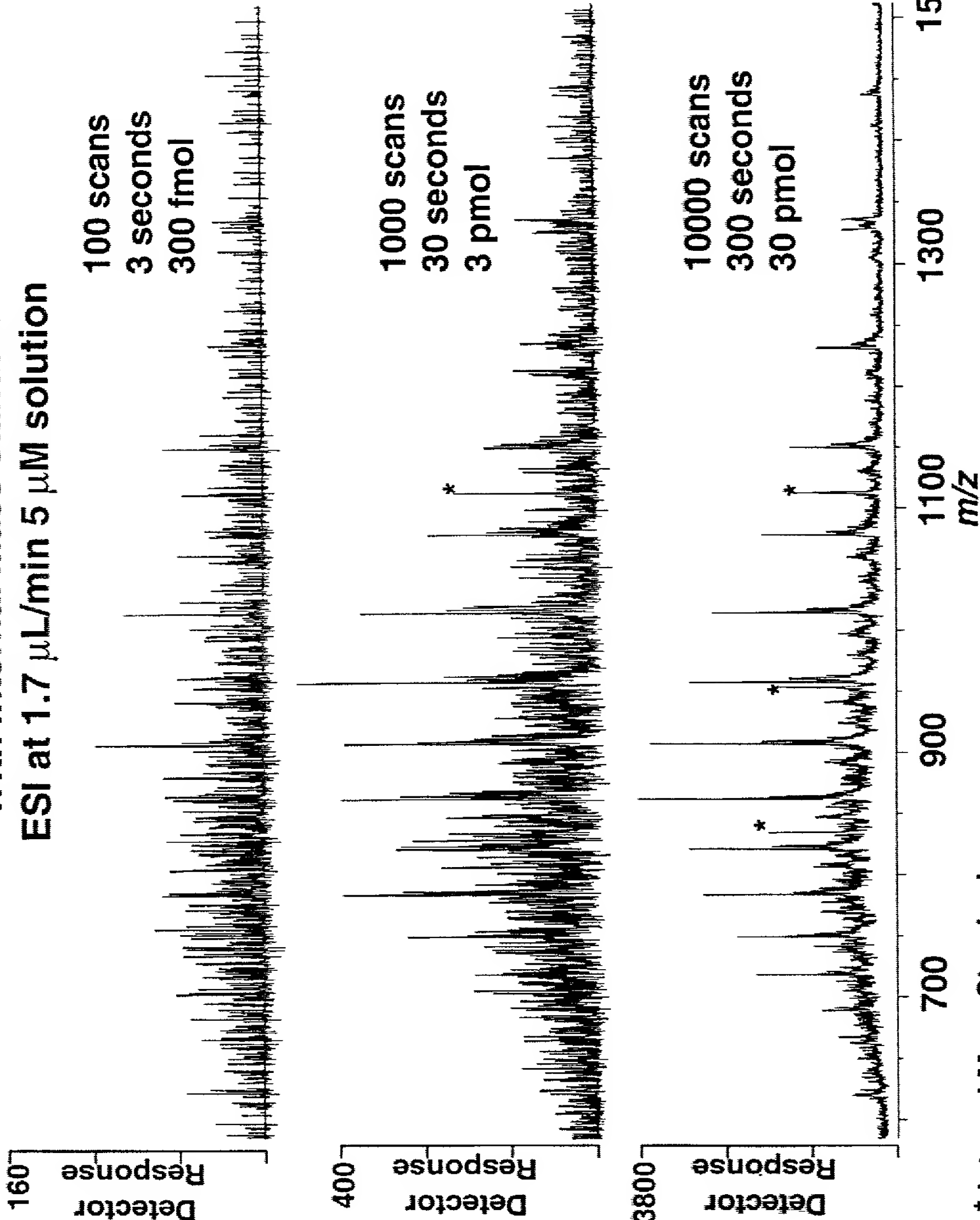


FIG. 9

ESI-FTICR-MS of Synthetic Bacillus anthracis 16S_1337 46 bp duplex



ESI-TOF-MS of 56-mer BASb Oligonucleotide
With internal mass standard
ESI at 1.7 $\mu\text{L}/\text{min}$ 5 μM solution



* Internal Mass Standard

FIG. 11

ESI-TOF-MS of Internal Standard with 5 mM TBA-TFA buffer

Charge Stripping with Tributylammonium trifluoroacetate reduces most abundant charge state from $[M-8H^{+}]^{8-}$ to $[M-3H^{+}]^{3-}$

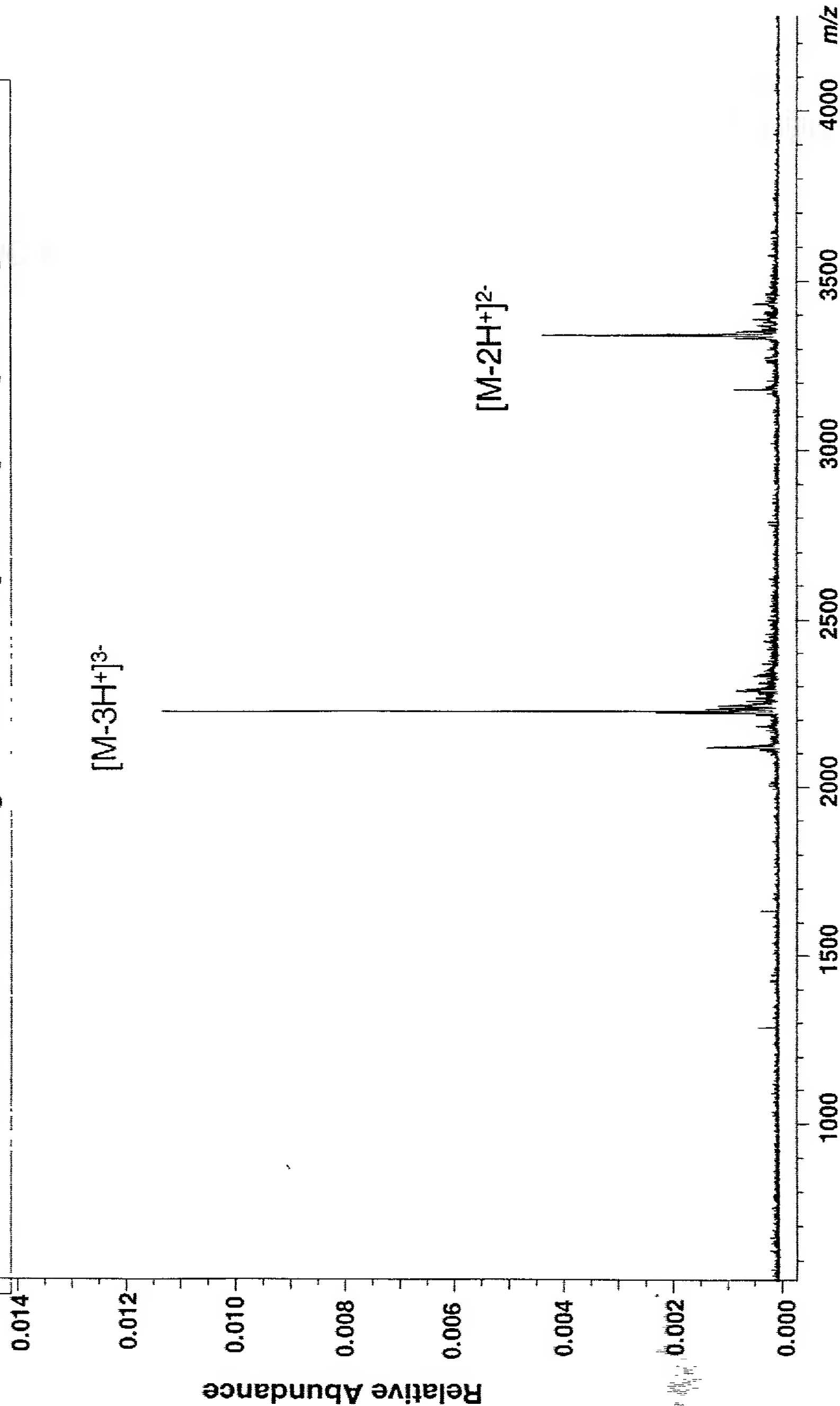


FIG. 1a

Pairing	(...(((.....((....(.(..... .. (.....((((..)
P notation	
Tag line 1	0.....0.....0.0.....0.....0.....0.....0.....
Tag line 2	1.....1.....1.2.....2.....2.....2.....2.....
Tag line 3	7.....8.....9.0.....1.....2.....3.....136.....
E. coli Sequen	20.....1300.....130140.....130.....131.....130.....150.....160.....
E.coli Marker	----- ----- ----- ----- ----- ----- ----- -----
E.coli	AUGU-CUGGGA-AACUGCCUGAUGC<----->AGG-GGGAUAAACUACU-G(GA-AA)
Hom.sapien	AUC-AGUAUUGGUU-CCUUUGGUGC<UEGCUCUCUCUCU>ACU-UGGAUAACUGUG-G(UAAUU)
Mt.H:sapie	CAC-CCUCUA-AAUC-----<----->
Act.israe5	CAC-GUGAGUAACC-UGCCCCUCAC<----->UUC-UGGAUAACCGCU-U(GA-AA)
Gor.diphth	CAC-GUGGGUGAUC-UGCCUCGUAC<----->UUC-GGGAUAAAGCEUG-G(GA-AA)
Myb.avium2	CAC-GUGGGCAAUC-UACCCUGCAC<----->UUC-GGGAUAAAGCEUG-G(GA-AA)
Myb.leprae	CAC-GUGGGUAANC-UGCCCUGCAC<----->UUCAGGGAUAAAGCUUG-G(GA-AA)
Myb.tuber3	CAC-GUGGGUGAUC-UGCCCUGCAC<----->UUC-GGGAUAAAGCEUG-G(GA-AA)
Noc.aster4	CAC-GUGGGUGAUC-UGCCUCGUAC<----->UUC-GGGAUAAAGCCUG-G(GA-AA)
Stm.acidsc	CAC-GUGGGCAAUC-UGCCCUUCAC<----->UCU-GGGACAAGCCCU-G(GA-AA)
Stm.albfly	CAC-GUGGGCAAUC-UGCCCUGCAC<-----+---->UCU-GGGACAAGCCCU-G(GA-AA)
Stm.albus	CAC-GUGGGCAAUC-UGCCCUGCAC<----->UCU-GGGACAAGCCCU-G(GA-AA)
Stm.ambofa	CAC-GUGGGCAAUC-UGCCCUGCAC<----->UCU-GGGACAAGCCCU-G(GA-AA)

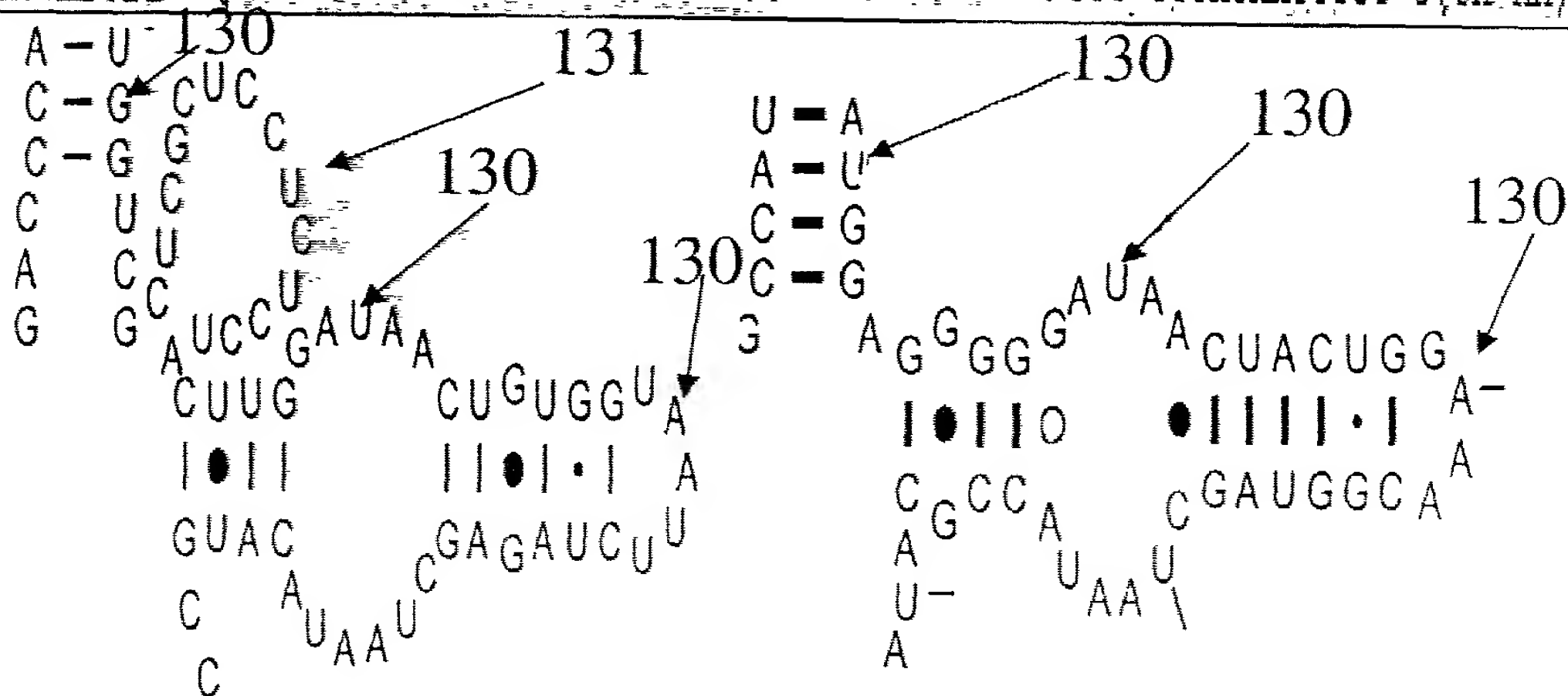
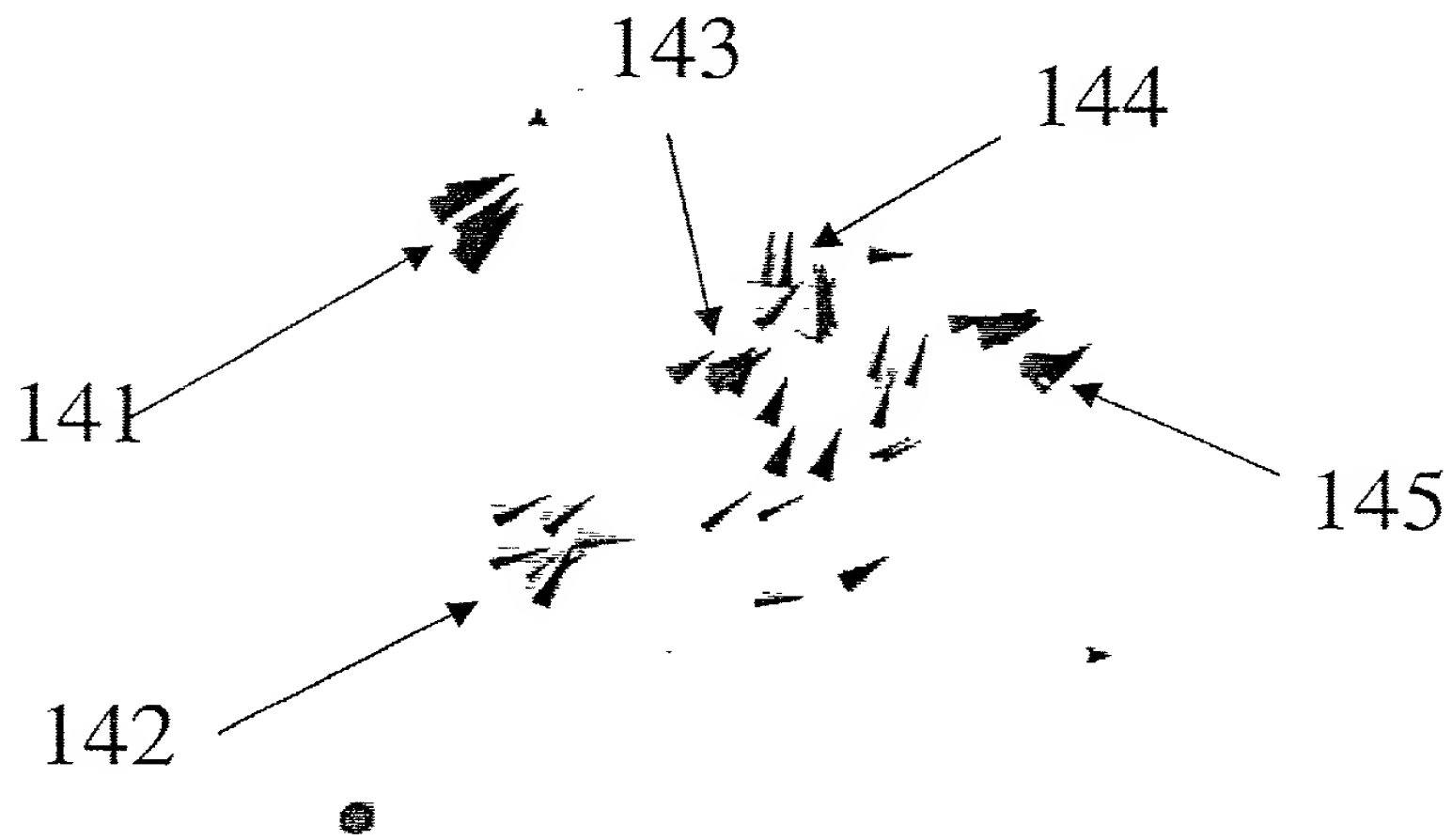


Figure 14



TOP SECRET

Figure 15

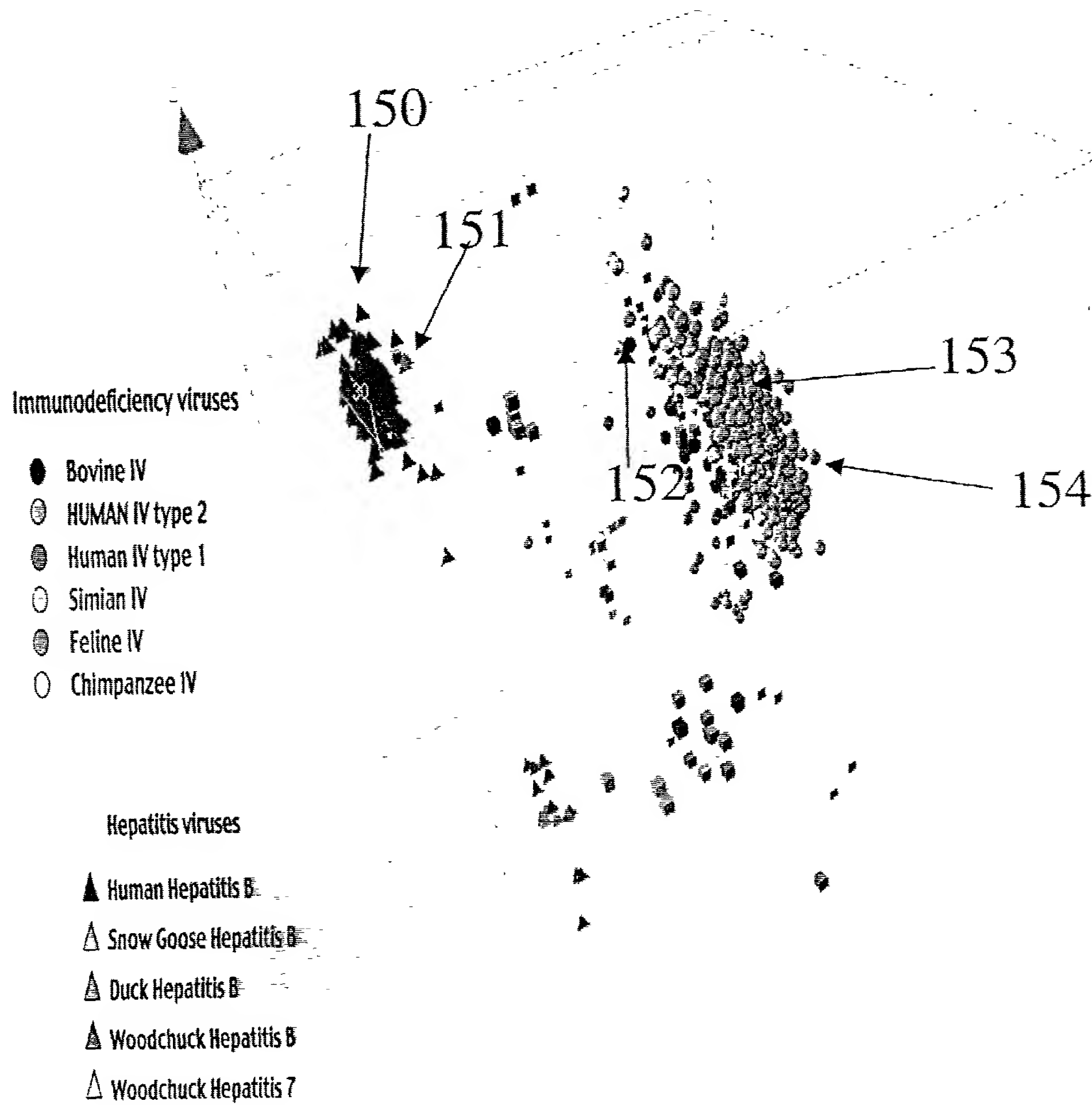
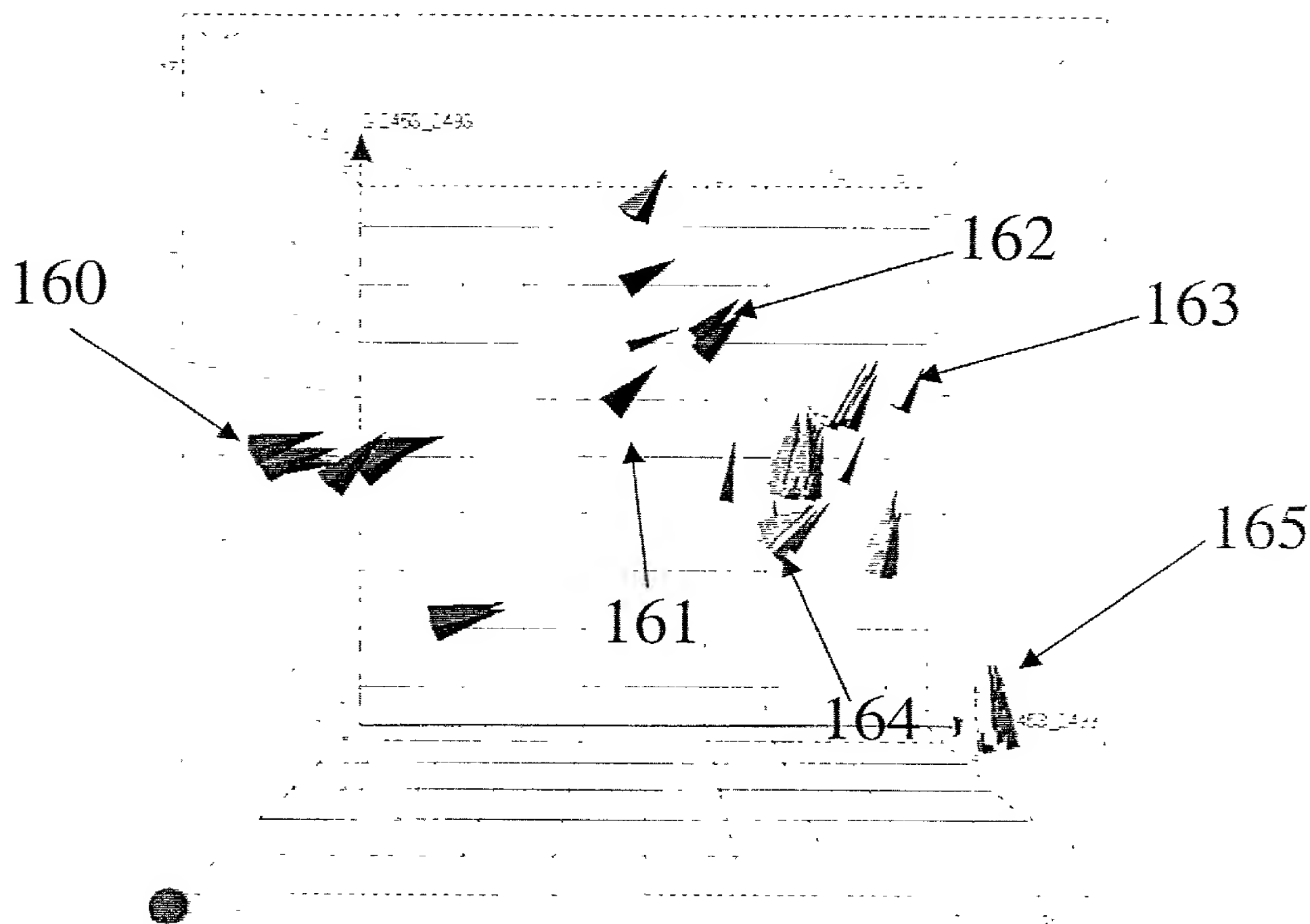


Figure 16



- Flavi RdRp 2453-2493**
- | | | |
|---------------------|------------------------------------|---------------------------------|
| ■ Dengue virus type | ■ Japanese encephalitis virus | ■ Tick-borne encephalitis virus |
| □ Dengue virus type | ■ Kunjin virus | ■ West Nile virus |
| ■ Dengue virus type | □ Murray valley encephalitis virus | □ Yellow fever virus |

Figure 17

